

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application.

1 (currently amended) A high-strength thick steel plate excellent in low temperature toughness at heat affected zone resulting from large heat input welding, characterized by containing, by wt%,

C: 0.03-0.14%,

Si: 0.30% or less,

Mn: 0.8-2.0%,

P: 0.02% or less,

S: 0.005% or less,

Al: 0.001-0.040%,

N: 0.0010-0.0100%,

Ni: 0.8-4.0%,

Ti: 0.005-0.030%, and

Nb: 0.003-0.040%,

where Ni and Mn satisfy equation [1], and the balance of iron and unavoidable impurities:

$$\text{Ni/Mn} \geq 10 \times \text{Ceq} - 3 \quad (0.36 < \text{Ceq} < 0.42) \quad (0.36 \leq \text{Ceq} \leq 0.42) \quad [1]$$

where, $\text{Ceq} = \text{C} + \text{Mn}/6 + (\text{Cr} + \text{Mo} + \text{V})/5 + (\text{Ni} + \text{Cu})/15$.

2 (original): A high-strength thick steel plate excellent in low temperature toughness at heat affected zone resulting from large heat input welding according to claim 1, characterized by further containing, by wt%,

one or more of:

Ca: 0.0003-0.0050%,

Mg: 0.0003-0.0050%, and

REM: 0.001-0.030% and
contains at least 100/mm² of oxide particles containing

O: 0.0010-0.0050%

and having a equivalent circle diameter of 0.005 to 0.5 μm.

3 (previously presented): A high-strength thick steel plate excellent in low temperature toughness at heat affected zone resulting from large heat input welding according to claim 1, characterized by further containing, by wt%,

B: 0.0005-0.0050%.

4 (previously presented): A high-strength thick steel plate excellent in low temperature toughness at heat affected zone resulting from large heat input welding according to claim 1, characterized by further containing, by wt%,

one or more of:

Cr: 0.1-0.5%,

Mo: 0.01-0.5%,

V: 0.005-0.10%, and

Cu: 0.1-1.0%.

5 (new): A high-strength thick steel plate excellent in low temperature toughness at heat affected zone resulting from large heat input welding according to claim 1, containing, by wt%,

Al: 0.012 - 0.040%.